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# BREDIN-ARCHBOLD-SMITHSONIAN SURVEY OF DOMINICA: PHYCITINAE (LEPIDOPTERA: PYRALIDAE)

Jay C. Shaffer

*Abstract.*—This paper covers twenty-six species in twenty-three genera. Twenty-four of the species are new records for Dominica. One genus and three species are described as new. Hostplant and distributional data are provided, as are photographs of wings, head profiles, and genitalia (except those illustrated by Heinrich, 1956).

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This paper covers and is largely limited to material collected during the Bredin-Archbold-Smithsonian Biological Survey of Dominica, West Indies in 1964–65.

Included are 25 species in 23 genera, plus one species recorded from Dominica, but which I have been unable to verify. One genus, *Fissicera*, and three species, *Acrobasis caribbeana*, *Piesmopoda dominica*, and *Fissicera spicata* are described as new. Three of the included species are identified to genus only (*Drescoma*, *Mescinia*, and *Moodnopsis*), and one species ([*Myelois*] *famula*) should be assigned to another genus when males become available for study.

Heinrich (1956) lists but two species from Dominica, *Sarasota furculella* and *Piesmopoda apocerastes*, only the former of which is represented in the survey collection. Certain common West Indian phycitines, notably *Ufa rubedinella* and *Elasmopalpus lignosellus*, have not yet been found on Dominica, but may well occur there.

I owe a great debt to Heinrich's monumental revision of the Neotropical Phycitinae (1956), for without that great synthesis the present paper could not have been attempted. Hostplant and distributional data (except for Dominica) cited herein are from Heinrich (1956). Dominica material is listed by locality, date (month and year only), number of each sex, and collector, the latter given by initials as follows:

JC—J. F. Gates Clarke
TC—Thelma M. Clarke
DD—Donald R. Davis
OF—Oliver S. Flint, Jr.
PS—Paul Spangler
ET—E. L. Todd

Table 1. Distribution of species.[1]

| Species | United States | Mexico | Central America | Bahama Islands | Cuba | Hispaniola | Jamaica | Puerto Rico | Virgin Islands | St. Kitts | Montserrat | Dominica | Barbados | Grenada | Trinidad & Tobago | Venezuela | Guyana | Fr. Guiana | Colombia | Ecuador | Peru | Brazil | Bolivia | Paraguay | Argentina |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Hypsipyla grandella* | x | x | x | | | x | x | x | | | | x | | | x | x | x | | | x | x | x | | x | x |
| *Hypargyria definitella* | | | | | | | | x | x | | | x | | | | | | | x | | | x | | | |
| *Ectomyelois muriscis* | | | x | | | x | | x | | | | x | | x | x | | x | x | x | | | x | x | | |
| *Fundella pellucens* | x | | | | x | x | | x | x | | x | x | x | | | | | | | | | x | x | | |
| *Fundella argentina* | x | x | | | x | x | x | x | x | | | x | | | | x | | | | | | x | | | x |
| *Coptarthria dasypyga* | | | x | | | | | | | | | x | | | | | | | x | | | | | | |
| *Davara caricae* | x | | x | | x | x | | x | | | | x | | | x | | | | | x | | | | | |
| *Sarasota furculella* | | | | | x | | | x | x | | | x | | | | | | | | | | | | | |
| *Ancylostomia stercorea* | x | x | x | x | x | x | x | x | x | x | | x | | x | x | | | x | x | | | x | | | |
| *Oryctometopia fossulatella* | x | x | x | | | | | x | x | | | x | | | | x | | | | | | x | | | |
| *Bema neuricella* | | | x | x | x | | | x | x | | | x | | | x | | | x | | | | | | | |
| *Rotuda mucidella* | x | | x | | x | | | | x | | | x | | | | | | | | | | x | | x | |
| *Unadilla erronella* | | | x | x | | | | x | x | | | x | | | | | | | x | | | | | | |
| *Unadilla maturella* | | | x | | x | | | | | | | x | | | | | | | x | | | | | | |
| *Ephestiodes stictella* | | | | x | | | x | x | x | | | x | | | | | | | | | | | | | |
| *Varneria dubia* | | | | | | | | x | | | | x | | | | | | | | | | | | | |
| *Erelieva quantulella* | x | | | | x | x | | x | x | | | x | | | | | | | | | | | | | |
| [*Myelois*] *famula* | | | | | | | | | | | | x | | | | | | | x | | | | | | |

[1] Data extracted from Heinrich, 1956 (except for Dominica records). Dominica endemics and *Ephestia cautella*, a cosmopolitan pest, omitted.

I should like to thank Douglas Ferguson for giving of his time in discussing a number of problems associated with this study, and also Jack Scott for preparing the photographs used in Figs. 1a and 2.

Genitalia figured in Heinrich (1956) are not illustrated herein.

*Acrobasis caribbeana*, new species
Figs. 3a; 5b; 7a, b, c; 8a

*Acrobasis caribbeana*, new species.

This species differs from all other known members of *Acrobasis*, except *minimella* Ragonot, in having the combination of scale tufts on the forewings and the apical process of the gnathos developed as a simple hook (rather than trifurcate). The forewings are more narrow than those of *minimella* and have a very different coloration. In particular, the ground of *caribbeana* is a nearly uniform brown, devoid of conspicuous markings save those in the region of the raised scale tufts. Most notably, *minimella* specimens have a prominent blackish triangular patch distal to the antemedial line, this patch being absent in *caribbeana*. The genitalia do not provide diagnostic species characters.

*Description.*—Forewing narrow; radius 5–6 mm; ground variable, basically light chocolate brown sewn with scattered white scales, in some specimens heavily marked with dark wine-red scales; antemedial line raised in both sexes, prominent, white sewn with light reddish-brown scales, bordered distally by broad band of brown scales; subterminal line poorly developed in some specimens, absent in others. Hindwing with $M_{2+3}$ stalked for nearly half their length. Male genitalia with apex of gnathos a simple hook.

*Holotype.*—♂, No. USNM 75712, labeled: "Dominica, Clarke Hall, XI-19-25-64, P. J. Spangler; Bredin-Archbold-Smithsonian Bio. Surv. Dominica; ♂ genitalia on slide 1086 J. C. Shaffer."

*Paratypes.*—1♂, 1♀, same data as holotype; Clarke Hall, X-12-18-64, 1♀; X-19-22-64, 1♀; XI-12-17-64, 2♀; XII-11-16-64, 1♀, all P. J. Spangler; 4-X-66, 1♀; 10-X-66, 1♀, both E. L. Todd; 1♀, 0.4 mi E of Pont Casse, VI-23-1964, O. S. Flint, Jr.; 1♀, 3 mi E Pont Casse, 30-X-1966, E. L. Todd; 1♀, 3 mi E Pont Casse, XII-1-1964, Paul J. Spangler.

Heinrich covers 39 New World species, all North American. This is the first species to be described from the Neotropics.

*Hypsipyla grandella* (Zeller)
Figs. 3b, 5a

*Hypsipyla grandella* (Zeller). Heinrich, 1956:28–29.

This widely distributed species ranges from southern Florida southward

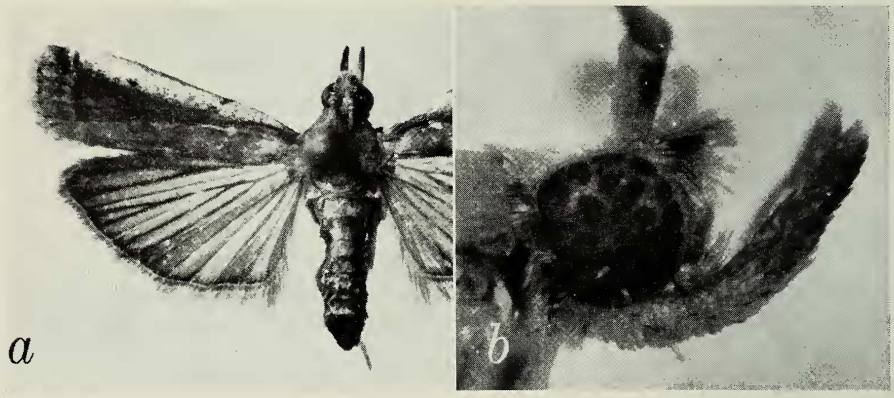



Fig. 1. *Fissicera spicata*, new species. a, female paratype; b, holotype male.

through Central America and the West Indies to Argentina. The larva is reported to be a borer in fruits and branches of *Cedrela* and *Swietenia* (Meliaceae).

*Material.*—Grande Savane, Oct. 1966. 3♀, ET; S. Chiltern, Dec. 1964, 1♂, 3♀, PS.

*Hypargyria definitella* (Zeller)
Figs. 2a, 5c

*Hypargyria definitella* (Zeller). Heinrich, 1956:37–38.

Males of this species can be readily recognized by the shiny silver patches on the undersides of both fore and hind wings. The Dominica series, unfortunately, consists of but two female specimens.

*Material.*—One mi N of Mahau, June 1964, 1♀, OF; Grande Savane, April 1965, 1♀, DD.

*Ectomyelois muriscis* (Dyar)
Figs. 3c, 5d

*Ectomyelois muriscis* (Dyar). Heinrich, 1956:45.

Larvae feed in the fruits of *Mammea americana* (mamey, Guttiferae) and *Theobroma cacao* (cacao, Sterculiaceae). This species ranges from the West Indies and Central America south through Brazil, and is well represented among the Dominica material.

*Material.*—Antrim 1,000′, Mar. 1956, 1♂, JC; Anse Bouleau, Oct. 1964, 1♀, PS; Clarke Hall, Mar. 1965, 1♀; Jan. 1965, 1♀, JC, TC; Feb. 1965, 1♀, JC, TC; Mar. 1965, 1♀, JC, TC; Apr. 1965, 9♀, DD; May 1965, 1♀, DD;

Oct. 1966, 3♂, 4♀, ET; Nov. 1966, 1♀, ET; Oct. 1964, 1♂, 1♀, PS; Nov. 1964, 1♂, 2♀, PS; Dec. 1964, 1♂, PS; Macoucheri, Feb. 1965, 1♀, JC, TC; 2 mi NW Pont Casse, May 1965, 1♀, DD; South Chiltern, May 1965, 1♀, DD; Springfield, June 1965, 2♀, DD.

*Fundella pellucens* Zeller
Figs. 2b, 5e

*Fundella pellucens* Zeller. Heinrich, 1956:60.

The larvae feed on a variety of legumes. Heinrich reports: *Vigna unguiculata*, *Canavalia ensifermis*, *Canavalia maritima*, *Cajan cajan*, and species of *Phaseolus*.

Heinrich records specimens from Florida, the West Indies, Brazil, and Bolivia. I've seen only one specimen from Dominica, taken at Cabrit Swamp, 10–13 May 1956, by D. R. Davis.

*Fundella argentina* Dyar
Figs. 3d, 5f

*Fundella argentina* Dyar. Heinrich, 1956:61.

Heinrich reports the larvae feeding on *Poinciana gilliesi* and species of *Cassia*.

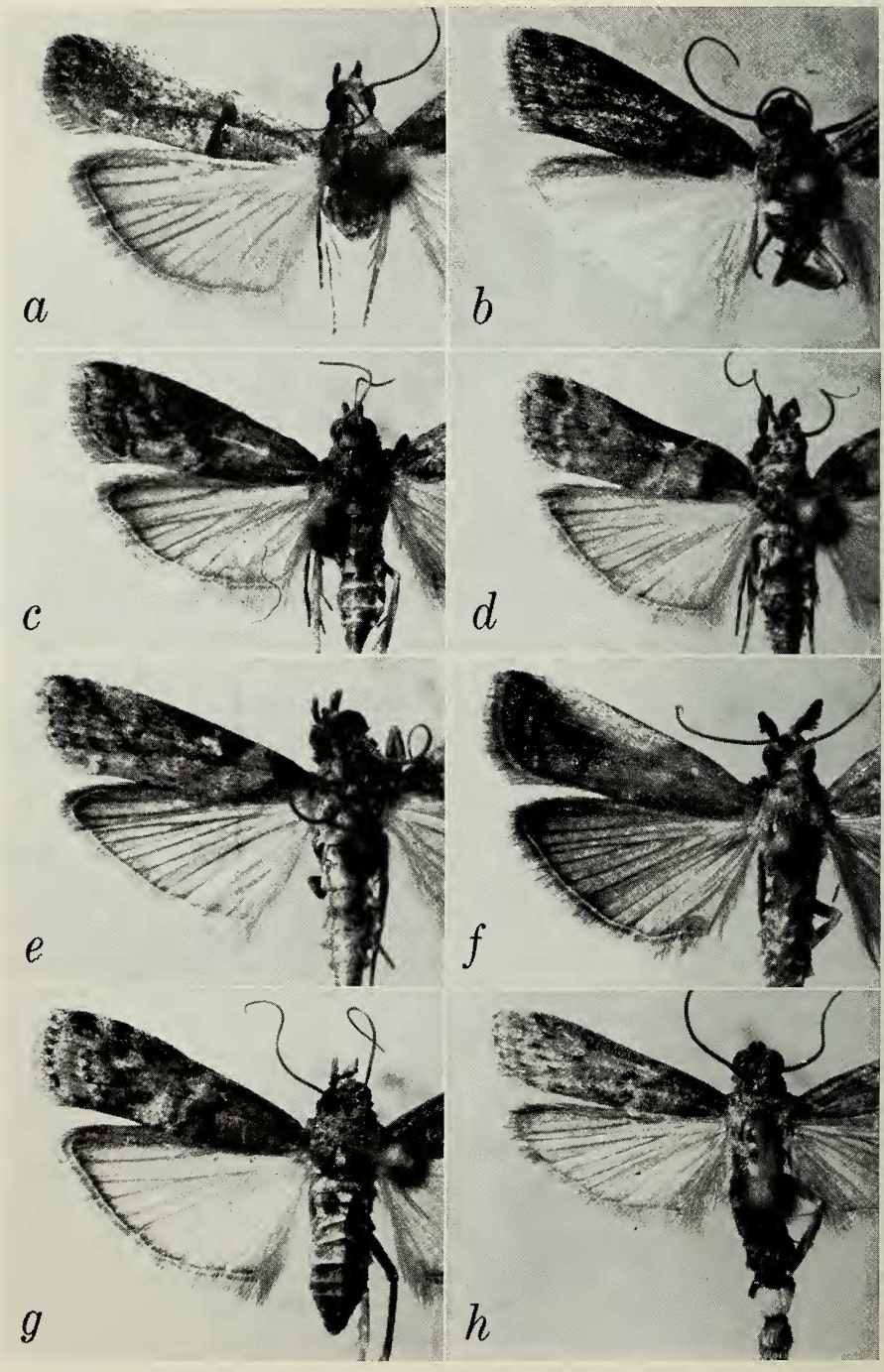
Distributed from Florida, Texas, and the West Indies south to Argentina. In the Dominica collection this species is represented by a single male, taken at Grande Savane, 11 Oct. 1966, by E. L. Todd.

*Coptarthria dasypyga* (Zeller)
Figs. 2c, 5g, 8b

*Coptarthria dasypyga* (Zeller). Heinrich, 1956:65.

This species has previously been known only from the type locality in Colombia and from Guatemala. Heinrich was uncertain as to which females should properly be associated with the type, and his figure of the female genitalia is listed questionably as belonging to *dasypyga*. The Dominica series consists of three females and a considerably paler male specimen. The difference in color between the two sexes is largely due to the differing intensity of the reddish scales, these being prominent in the females but hardly more than barely perceptible in the male. Having only one male it is impossible to say whether the variation is sexual or individual, but I believe them to be conspecific.

The genitalia of the Dominica females match the figure (718) of those of the specimen tentatively assigned to *dasypyga* by Heinrich, except that the former lack a signum and have a somewhat cordate shield near the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ostium. In view of these differences I doubt that the Dominica females are conspecific with the one figured by Heinrich. The same character differences apply when the Dominica females are compared with the Cayuga, Guatemala females mentioned by Heinrich; and in addition the Dominica females lack the long ductus bursae of the latter specimens.

*Material.*—0.5 mi S Pont Casse, Apr. 1965, 1♂, DD; 2 mi NW Pont Casse, Apr. 1965, 1♀, DD; June 1965, 2♀, DD.

*Davara caricae* (Dyar)
Figs. 2d, 5h

*Davara caricae* (Dyar). Heinrich, 1956:74.

This species is common in the West Indies and ranges from southern Florida through Central America to Ecuador. It is one of the most abundant phycitines on Dominica. The larvae are reported to feed in the fruit of papaya *(Carica papayae,* Caricaceae).

Dominica females lack the ventrolateral ridges of the eighth segment collar mentioned in Heinrich's description of *caricae.* ( These are omitted from Heinrich's drawing, figure 735, of the genitalia, though present in slides of *caricae* that I have examined in the National Museum collection.) While this is a clear-cut difference, I am reluctant to assign the Dominica population separate specific status, particularly since one would expect to find the common papaya-feeding *caricae* on Dominica. Considering the feeding habits of the larvae it may well have been introduced there.

*Material.*—Antrim, 1,000′, March 1956, 1♂, 1♀, JC; Bagatelle, March 1965, 1♀, JC, TC; Cabrit Swamp, May 1965, 1♀, DD; Cent. For. Res., May 1965, 1♂, 2♀, DD; Clarke Hall, Apr. 1965, 1♂, DD; Freshwater Lake, Nov. 1966, 1♂, 1♀, ET; Grande Savane, June 1965, 1♀, DD; Pont Casse, Apr. 1965, 1♀, DD; May 1965, 1♂, DD; June 1965, 1♂, DD; 0.5 mi S Pont Casse, Apr. 1965, 1♀, DD; 1 mi N Pont Casse, Apr. 1965, 1♀, DD; 2 mi NW Pont Casse, Apr. 1965, 10♂, 7♀, DD; May 1965, 4♂, 4♀, DD; June 1965, 5♂, 3♀, DD; 2.2 mi E Pont Casse, Apr. 1964, 1♀, OF; May 1964, 1♂, OF; 0.5 mi W Pt. Lolo, 1,600′, Feb. 1965, 1♂, 1♀, JC, TC; S. Chiltern, Dec. 1964, 5♀, PS.

*Sarasota furculella* (Dyar)
Figs. 2e, 5i

*Sarasota furculella* (Dyar). Heinrich, 1956:77.

Heinrich records the species from Cuba (TL: Santiago), Puerto Rico, Dominica, and St. Croix.

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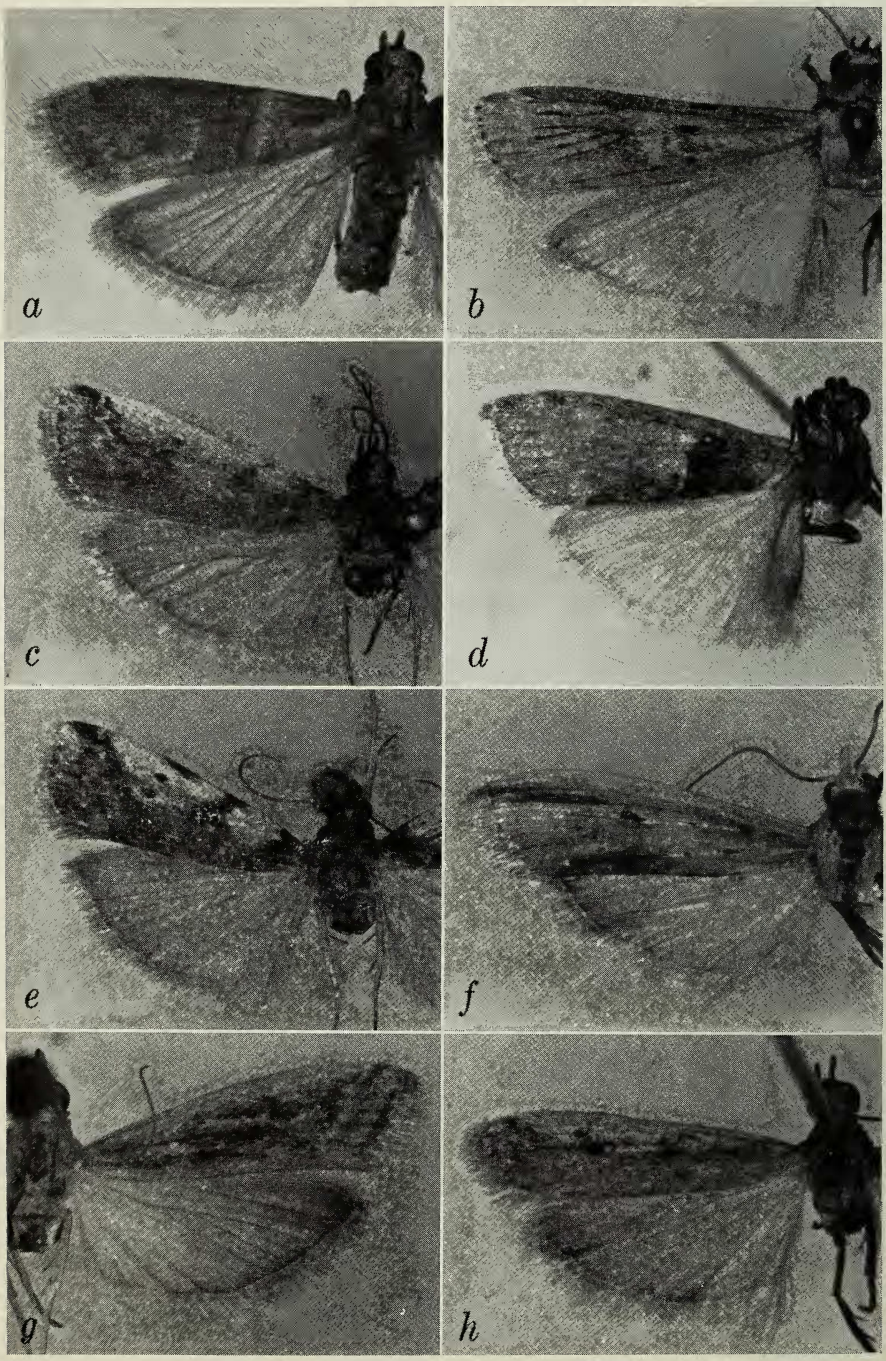
Fig. 2. a, *Hypargyria definitella*; b, *Fundella pellucens*; c, *Coptarthria dasypyga*; d, *Davara caricae*; e, *Sarasota furculella*; f, *Piesmopoda dominica*, new species, male paratype; g, *Oryctometopia fossulatella*; h, *Bema neuricella.*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*Material.*—Cabrit Swamp, May 1965, 1♀, DD; Oct. 1966, 3♂, 1♀, ET; Clarke Hall, April 1964, 2♂, 2♀, OF; Nov. 1964, 1♂, 2♀, PS; Dec. 1964, 1♀, PS; Grande Savane, April 1965, 1♂, DD; July 1964, 1♂, OF; Oct. 1966, 1♂, ET; 0.5 mi W Pt. Lolo, 1,600′, Feb. 1965, 1♂, JC, TC; 2 mi NW Pont Casse, May 1965, 1♂, DD; South Chiltern, Dec. 1964, 3♂, 11♀, PS. Trafalgar, May 1965, 1♀, DD. In the USNM collection are also 3 females taken on Dominica Dec. 1909 by W. D. Kearfott.

*Piesmopoda dominica*, new species
Figs. 2f; 5j; 7d, e, f; 8c

No one feature distinguishes this species from its relatives. Males are similar to *ragonoti* in having the labial palpi long, with the third segment fan shaped, and reaching beyond the vertex. The second segment, however, does not reach beyond the vertex as in *ragonoti*, and the basal half of the forewing is olive green rather than the bright yellow of *ragonoti*. Of the three species known only from females, *dominica* differs from *trichomata* in the shape of the eighth segment collar and in possession of longitudinal ridges on the ductus bursae, from *semirufella* in lacking a discal spot on the forewing and sclerotized plate at the ostium, and from *montella* in that the latter lacks a signum and has a very broad ductus bursae.

*Description.*—Frons reddish brown. Labial palpi of male ascending well beyond vertex, flattened and fan like distally with rounded apex; basal segments white; second olive brown on outer sides; outer sides of third olive brown anteriorly, terra cotta posteriorly, with line of black (broadened at apex) in between; inner sides of third segments mostly black, margins as on adjacent outer sides. Labial palpi of female less strongly ascending (at about 45°) than in male; maculation similar. Maxillary palpi short, attaining middle of frons, flat, somewhat broadened, appressed to frons; white. Tongue well developed. Base of male antenna reddish brown and black on anterior of inner sides, white on posterior of outer sides; shaft sublaminate, lacking sinus, filiform in female. Ocelli well developed, black. Vertex anterior to antennae bases black in male, light brown (often with reddish brown) in female; light brown posterior to antennae bases in both sexes. Occiput white dorsally, reddish brown (mixed with white) laterally. Patagia and tegulae olive brown.

Forewing radius 9–10 mm in most specimens (7 mm in smallest specimen examined); ground uniform olive green on basal half of forewing, ex-

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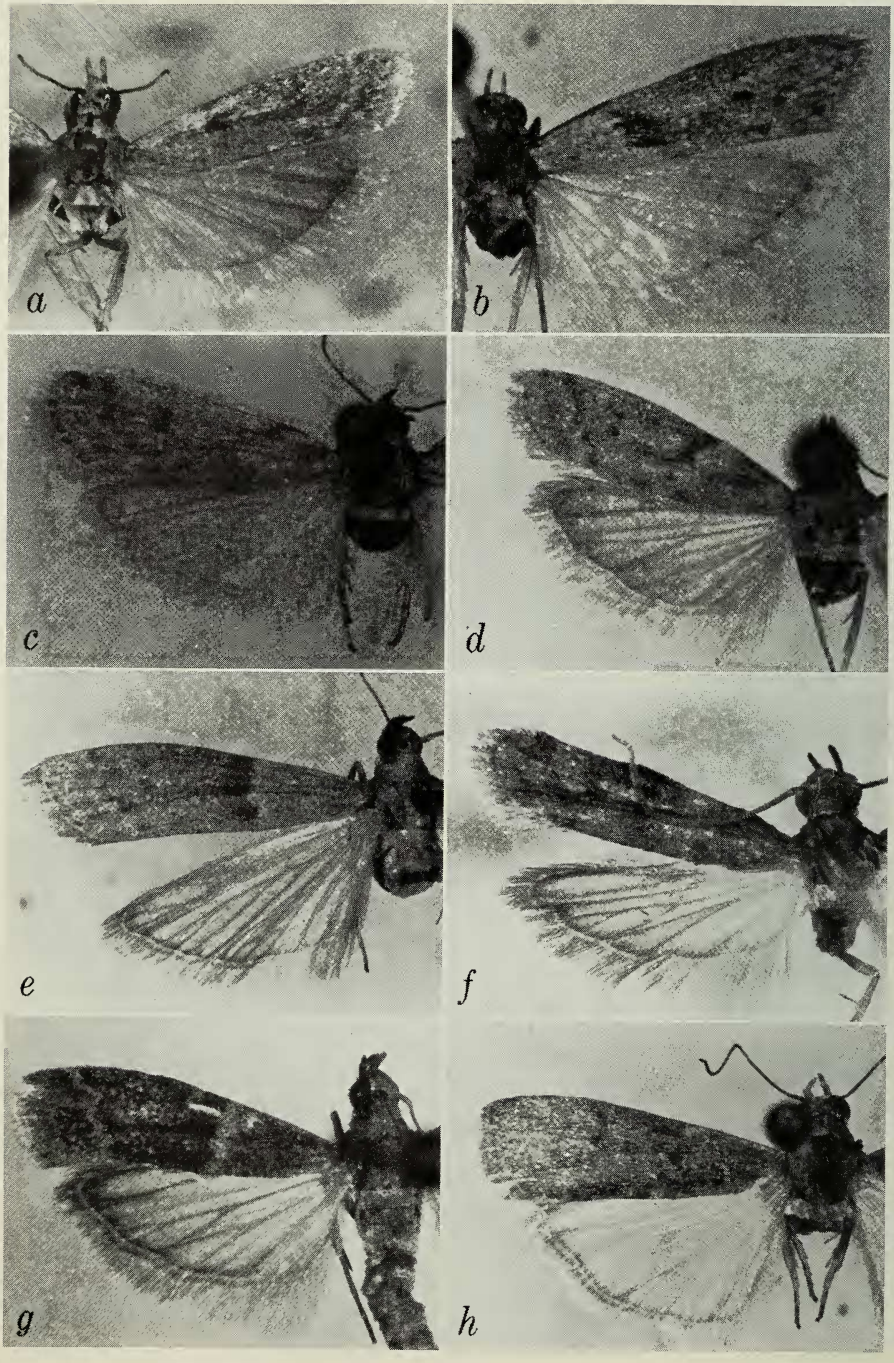
Fig. 3. a, *Acrobasis caribbeana*, new species, female paratype; b, *Hypsipyla grandella*; c, *Ectomyelois muriscis*; d, *Fundella argentina*; e, *Drescoma* sp.; f, *Ancylostomia stercorea*; g, *Mescinia* sp.; h, *Rotruda mucidella*.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tending farther apically along white costal band; distal two-thirds of costal margin white, sewn with reddish-brown scales, especially basally on extreme margin; costa reddish brown along entire margin except near apex; distal two-fifths of forewing reddish brown, with pair of poorly developed, somewhat darker subterminal lines; discal spots lacking; antemedial line lacking.

Male genitalia with each arm of bifid uncus slender, finely ciliate on dorsal surface of slender portion, and along outer margin toward broadened base. Spine of anellus sharp-pointed, basally broadened. Vinculum subtruncate. Two large masses of semi-deciduous hair-like scales originate from pair of short bars near valve bases; lesser masses of hairs present along ventral margin of sacculus.

Female genitalia with ductus bursae slender, very lightly ridged longitudinally near ostium, but lacking sclerotized region near ostium. Collar of eighth abdominal segment deeply and narrowly notched ventrally, notch opening posteriorly; collar rather strongly longitudinally ridged laterally on invaginated section. Bursa well developed, granular in appearance; ductus seminalis broadly joined to bursa near its posterior end; flared and twisted about ductus bursae where joining bursa; signum present.

*Holotype.*—♂, No. USNM 75713, labeled: "Dominica, Pont Casse, 2 mi. NW, v. 15. 1965, D. R. Davis; ♂ genitalia on slide 990, J. C. Shaffer."

*Paratypes.*—Dominica, 2 mi NW Pont Casse, 13 Apr. 1965, 1♀, 18 Apr., 3♂, 21 Apr., 1♀, 24 Apr., 1♀, 25 Apr., 1♀, 27 Apr., 2♀, 30 Apr., 3♀, 4 May, 2♀, 5 May, 1♂, 16 May, 2♂, 2♀, 17 May, 2♂, 6♀, 18 May, 2♂, 2♀, 24 May, 1♂, 1♀, 25 May, 1♀, 14 June, 1♂, all by D. R. Davis.

*Other material examined.*—1.3 mi E of Pont Casse, May 1964, 1♀, OF; Cent. For. Res., Apr. 1965, 2♀, DD; May 1965, 1♂, 2♀, DD.

### *Piesmopoda apocerastes* Dyar

*Piesmopoda apocerastes* Dyar. Heinrich, 1956:81.

This is one of two species recorded by Heinrich from Dominica. I have not been able to find the specimen(s) on which this record is based, nor has the Dominica survey produced any material of this species.

### *Drescoma* sp.

Figs. 3e, 5k, 8d

*Drescoma* Dyar. Heinrich, 1956:88–89.

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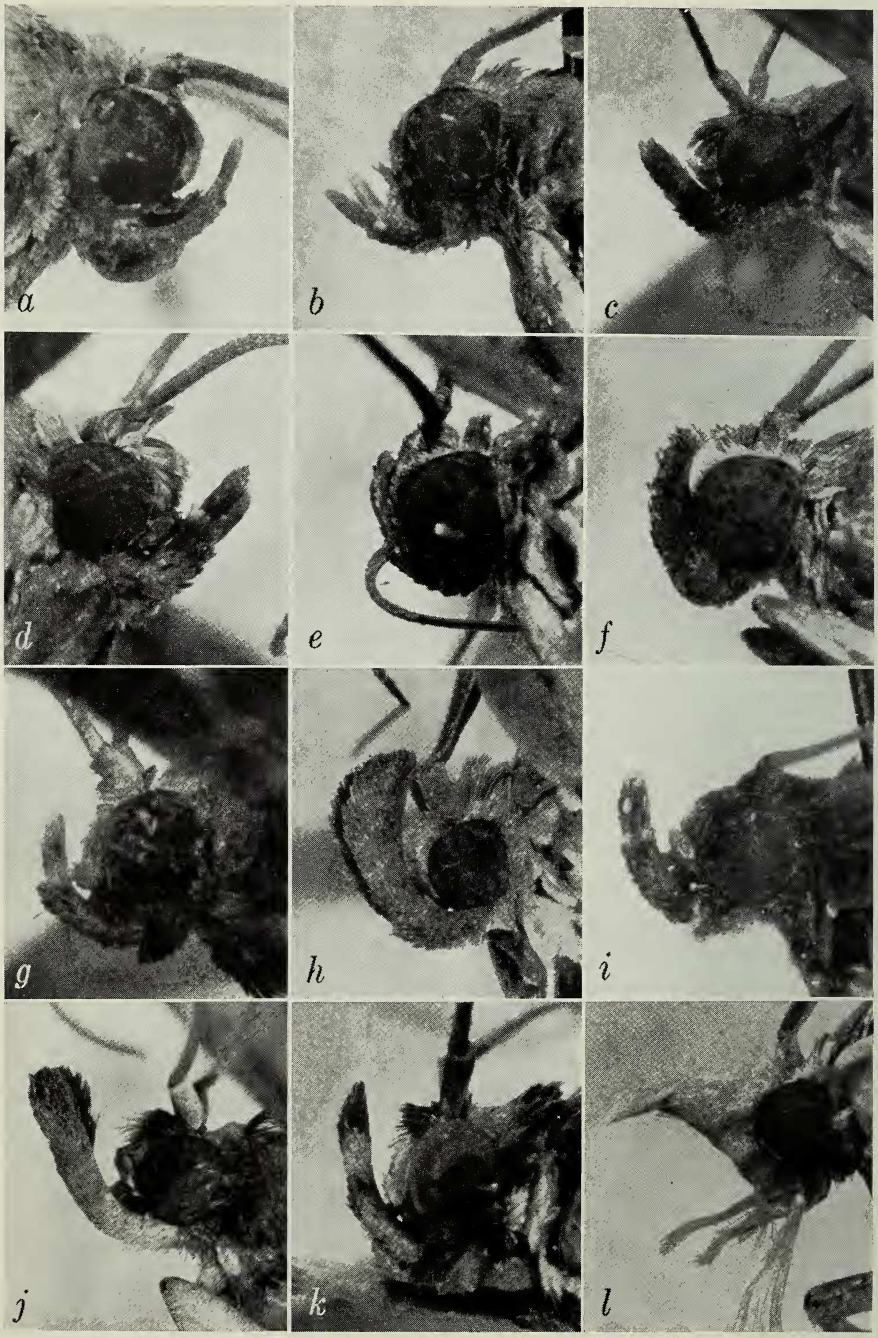
Fig. 4. a, *Unadilla erronella*; b, *Unadilla maturella*; c, *Moodnopsis* sp.; d, *Ephestiodes stictella*; e, *Ephestia cautella*; f, *Varneria dubia*; g, *Erelieva quantulella*; h, [*Myelois*] *famula*.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Heinrich covers two species of *Drescoma*, *cyrdipsa* Dyar and *cinilixa* Dyar. The Dominica series consists of but five females. These are clearly not conspecific with *cyrdipsa* as the female genitalia differ in a number of important aspects. *D. cinilixa* is known only from male specimens from Panama (type locality) and Guatemala. These specimens are considerably paler (possibly due entirely to fading) than the Dominica moths and have a much sharper subterminal line on the forewing. The evidence at hand is insufficient to allow a decision between naming the Dominica population *cinilixa* or a new species; but in any case description of a new species would be unwarranted in the absence of male specimens.

*Material.*—Pont Casse, Apr. 1965, 2♀, DD; May 1965, 1♀, DD; June 1965, 1♀, DD; 0.5 mi W Pt. Lolo, 1,700′, Jan. 1965, 1♀, JC, TC.

*Ancylostomia stercorea* (Zeller)
Figs. 3f, 5l

*Ancylostomia stercorea* (Zeller). Heinrich, 1956:95–96.

Larvae are reported to feed in the pods of *Cajanus cajan* (pigeon pea, Fabaceae). The moth is abundant in southern Florida, the West Indies, and ranges from Mexico south through Central America to Colombia and Brazil.

*Material.*—Antrim, 1,000′, March 1956, 1♀, JC; Clarke Hall, May 1964, 1♂, OF.

*Oryctometopia fossulatella* Ragonot
Figs. 2g, 6b

*Oryctometopia fossulatella* Ragonot. Heinrich, 1956:159.

Larvae feed in the pods of *Bouhinia mexicana* (Leguminosae). The species ranges from Texas and Mexico south through Central America to Venezuela and Brazil, and is reported from Puerto Rico and St. Croix. Color and maculation are rather variable, even among the Dominica series.

*Material.*—Antrim, 1,000′, Mar. 1956, 1♂, JC; Cabrit Swamp, Oct. 1966, 5♀, ET; Clarke Hall, Apr. 1964, 1♀, OF; Grande Savane, June 1965, 1♀, DD; Nov. 1966, 1♀, ET; Pont Casse, Apr. 1965, 2♀, DD; May 1965, 2♂, 4♀, DD; June 1965, 1♀, DD; Rosalie, June 1965, 1♀, DD; South Chiltern,

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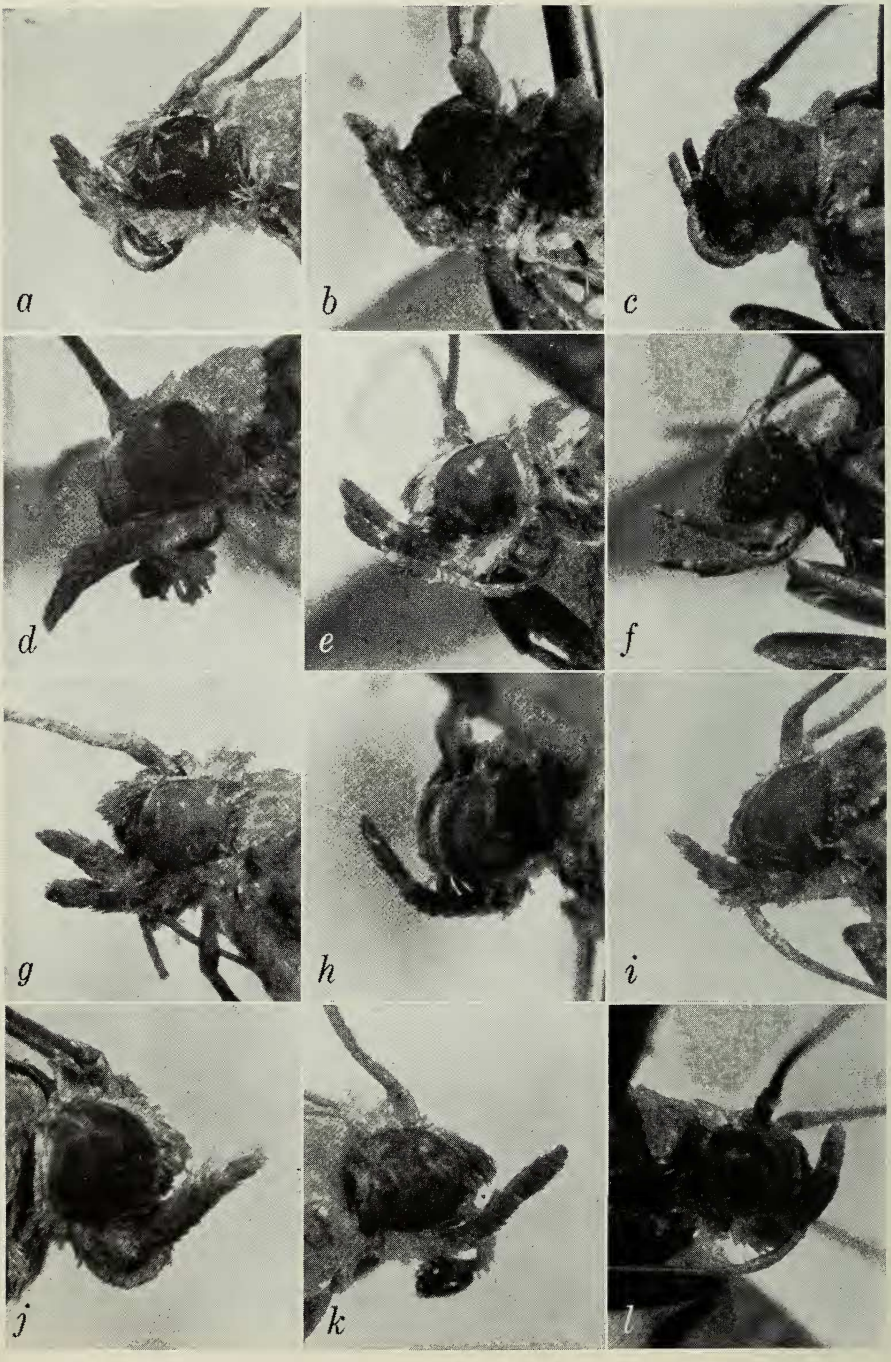
Fig. 5. a, *Hypsipyla grandella*; b, *Acrobasis caribbeana*, new species, holotype male; c, *Hypargyria definitella*; d, *Ectomyelois muriscis*; e, *Fundella pellucens*; f, *Fundella argentina*; g, *Coptarthria dasypyga*; h, *Davara caricae*; i, *Sarasota furculella*; j, *Piesmopoda dominica*, new species, holotype male; k, *Drescoma* sp.; l, *Ancylostomia stercorea*.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May 1964, 1♀, OF; May 1965, 2♂, 5♀, DD; Dec. 1964, 1♂, 1♀; PS; Trafalgar, May 1965, 3♀, DD.

*Mescinia* Ragonot
Figs. 3g, 6k

*Mescinia* Ragonot. Heinrich, 1956:212–215.

Heinrich divides this genus into three species groups recognizable on size. The wingspan range of the three Dominica specimens is from 11–14 mm. This puts them into the first species group and eliminates *peruella* Schaus, *discella* Hampson, and *indecora* Dyar from consideration. Heinrich remarks that the differences between the remaining eight species are slight and that ". . . it is almost impossible to define specific limits in this group with any certainty." The problem of identifying the Dominica material is particularly difficult as the series consists of but three female specimens, and potentially useful characters of the gnathos and aedeagus cannot be used.

*Material.*—Antrim, 1,000′, Mar. 1956, 1♀, JC; Cabrit Swamp, May 1965, 1♀, DD. Grande Savane, June 1965, 1♀, DD.

*Bema neuricella* (Zeller)
Figs. 2h, 6c

*Bema neuricella* (Zeller). Heinrich, 1956:218.

Larvae feed on various species of *Inga* (Fabaceae). Heinrich records the species from the Bahamas, Cuba, Puerto Rico, Virgin Islands, Guatemala, Panama, Trinidad, and French Guiana.

*Material.*—Antrim, 1,000′, Mar. 1956, 1♂, JC; Clarke Hall, Apr. 1964, 2♂, OF; Oct. 1964, 1♀, PS; Oct. 1966, 1♂, ET; Nov. 1964, 1♂, 1♀, PS; 1 mi E Clarke Hall, May 1965, 1♀, DD; Freshwater Lake, Nov. 1966, 1♀, ET; Grande Savane, Apr. 1965, 2♀, DD; May 1965, 1♀, DD; 2 mi NW Pont Casse, Apr. 1965, 2♂, 2♀, DD; May 1965, 1♂, 7♀, DD; South Chiltern, May 1965, 1♀, DD; Dec. 1964, 2♂, 4♀, PS; Springfield, June 1965, 2♀, DD.

*Rotruda mucidella* (Ragonot)
Figs. 3h, 6a

*Rotruda mucidella* (Ragonot). Heinrich, 1956:226–227.

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Fig. 6. a, *Rotruda mucidella*; b, *Oryctometopia fossulatella*; c, *Bema neuricella*; d, *Moodnopsis* sp.; e, *Unadilla erronella*; f, *Unadilla maturella*; g, *Ephestiodes stictellus*; h, *Varneria dubia*; i, *Erelieva quantulella*; j, *Myelois famula*; k, *Mescinia* sp.; l, *Ephestia cautella*.

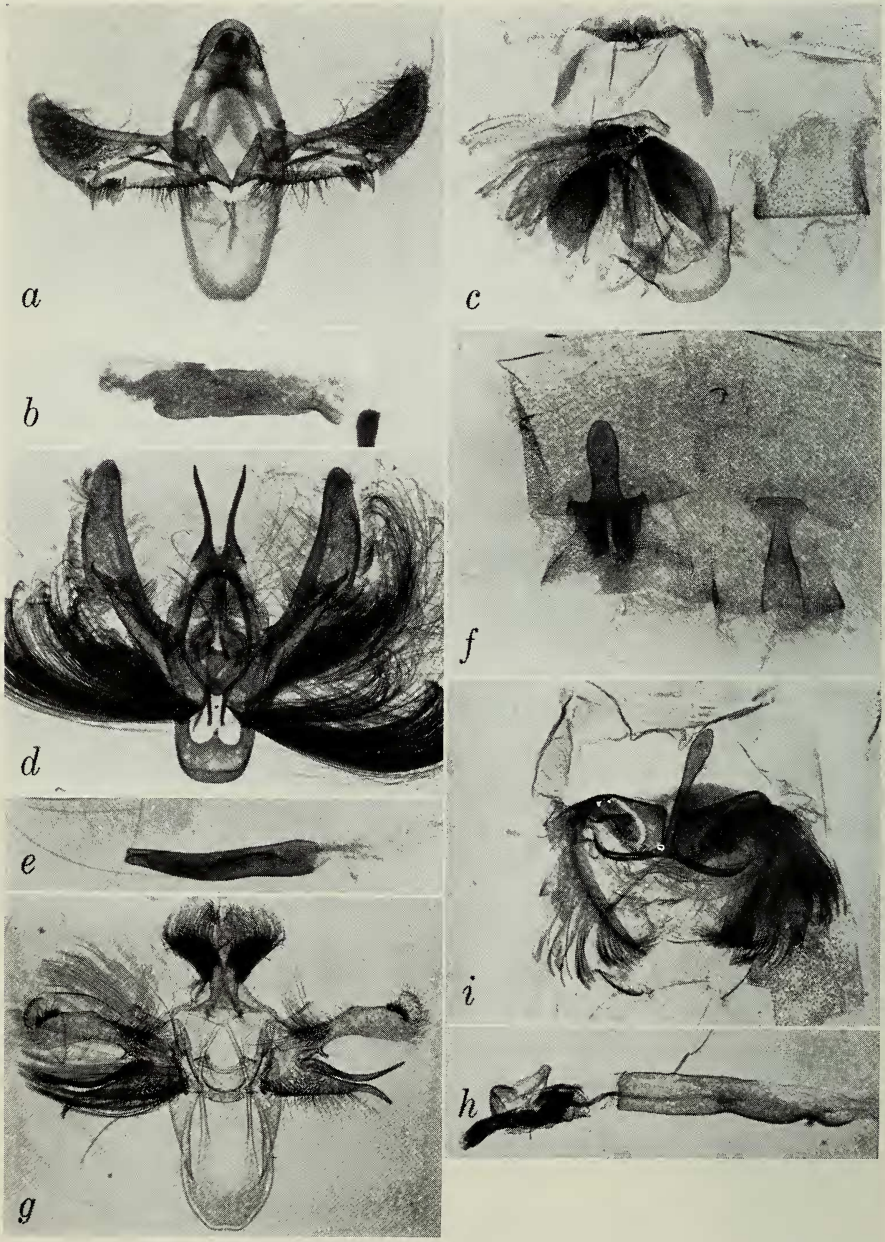



Fig. 7. a, *Acrobasis caribbeana*, new species, holotype, male genitalia; b, aedeagus; c, eighth abdominal segment; d, *Piesmopoda dominica*, new species, holotype, male genitalia; e, aedeagus; f, eighth abdominal segment; g, *Fissicera spicata*, new species, holotype, male genitalia; h, aedeagus; i, eighth abdominal segment.

Heinrich divided *mucidella* into four races (subspecies), and on the basis of geographical distribution the Dominica population should go with the *olivacella* race. I prefer not to follow this division since we know so little about this species. Heinrich himself said that . . . "The races at best are dubious entities . . ." and indicated that their apparent distinctness would likely break down under more extensive collecting.

*Material.*—Cabrit Swamp, Oct. 1966, 1♀, ET; 1 mi E Clarke Hall, Apr. 1965, 1♀, DD; Grande Savane, May 1965, 1♂, DD; Oct. 1966, 1♀, ET.

*Unadilla erronella* (Zeller)
Figs. 4a, 6e

*Unadilla erronella* (Zeller). Heinrich, 1956:228–229.

*Material.*—Cabrit Swamp, May 1965, 4♂, 1♀, DD; Nov. 1964, 1♀, PS; Grande Savane, Apr. 1965, 1♀, DD; May 1965, 1♂, 2♀, DD; 2.2 mi E of Pont Casse, May 1964, 1♀, OF.

*Unadilla maturella* (Zeller)
Figs. 4b, 6f

*Unadilla maturella* (Zeller). Heinrich, 1956:229.

The Dominica material consists of a single male specimen taken in the Central Forest Reserve on 25 April 1965, by D. R. Davis. The genitalia of this specimen differ slightly from those figured by Heinrich for *maturella* in that the apex of the uncus is rounded rather than expanded. In regard to this character the Dominica specimen is closer to Heinrich's figure of *erronella*, but in all other aspects is a good match for *maturella*.

Heinrich reports *maturella* from Colombia (type locality), Cuba, and Guatemala.

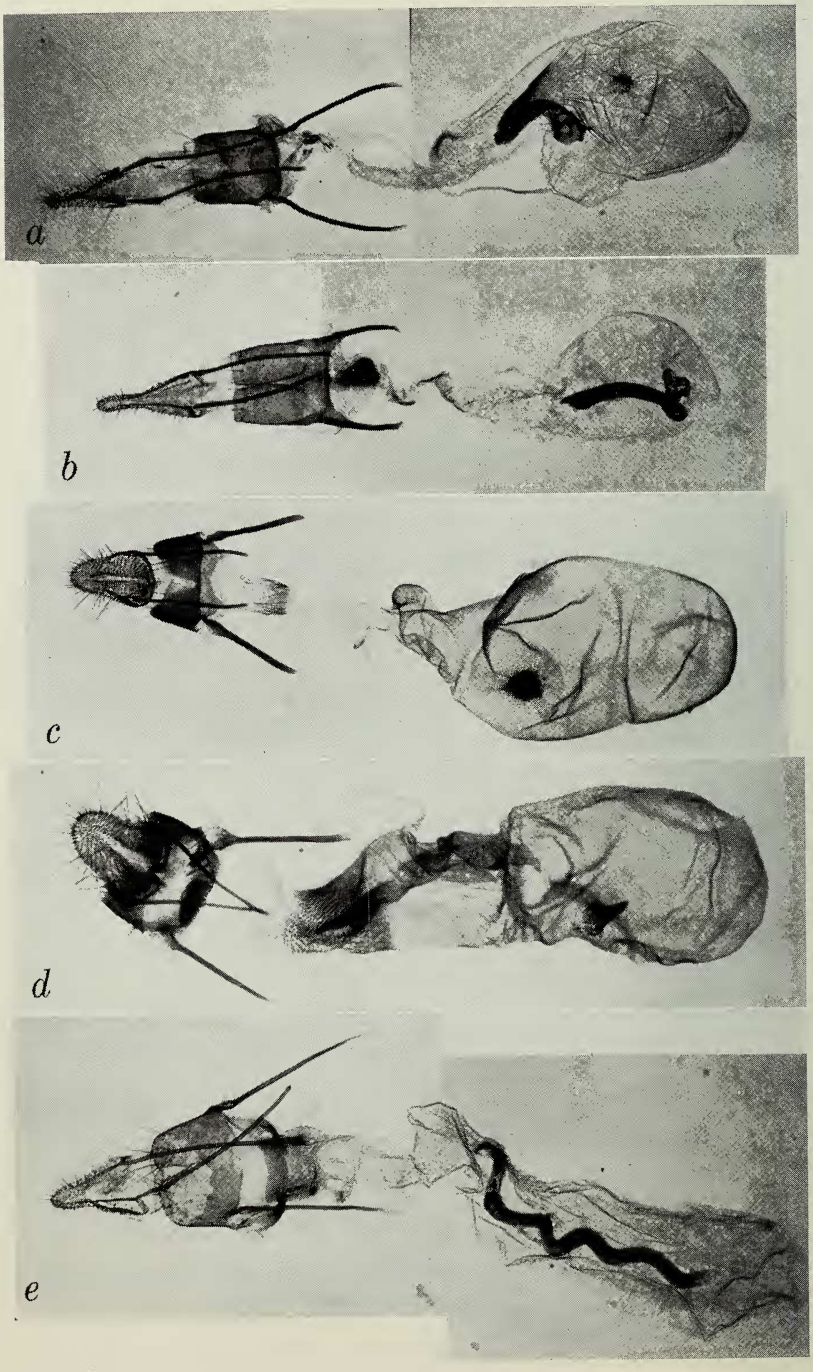
*Moodnopsis* sp.
Figs. 4c, 6d

*Moodnopsis* Dyar. Heinrich, 1956:269–271.

I have before me a single female specimen taken at Antrim, 1,000′, on 12 March, 1956, by J. G. F. Clarke. The specimen is in excellent condition and on the basis of palpi, wing venation, and genitalia is clearly a *Moodnopsis*, but in the absence of associated males cannot be determined to species.

*Ephestiodes stictella* (Hampson)
Figs. 4d, 6g

*Ephestiodes stictella* (Hampson). Heinrich, 1956:281–282.


a
b
c
d
e

The Dominica material is a good match for Heinrich's description of *stictella* in all ways (including the highly distinctive female genitalia) except that the form of the vinculum is closer to that illustrated for *noniella* Dyar.

Heinrich records the species from The Bahamas (type locality; Nassau) Jamaica, Puerto Rico, and St. Croix.

*Material.*—Cabrit Swamp, May 1965, 1♀, DD; Grande Savane, Apr. 1965, 1♂, 8♀, DD; May 1965, 1♂, DD; June 1965, 1♀, DD; 1 mi N of Mahau, June 1964, 1♀, OF.

*Ephestia cautella* (Walker)
Figs. 4e, 6l

*Ephestia cautella* (Walker). Heinrich, 1956:303.

This is a common cosmopolitan pest found infesting a great variety of dried foods such as fruits, nuts, and grains. The Dominica survey produced one female specimen, taken at Clarke Hall, 17 February 1965, by J. F. G. and Thelma M. Clarke.

*Varneria dubia* Heinrich
Figs. 4f, 6h

*Varneria dubia* Heinrich, 1956:306.

On the basis of both male and female genital structure the Dominica material matches Heinrich's description completely. Contrary to Heinrich's description the antemedial, and to a lesser extent the postmedial, lines are well developed. Wing maculation is somewhat variable within the Dominica series.

*Material.*—Cabrit Swamp, May 1965, 1♂, DD; Clarke Hall, Apr. 1965, 1♀, DD; Freshwater Lake, June 1965, 2♀, DD; 2 mi NW Pont Casse, May 1965, 6♀, DD; June 1965, 1♂, DD; 2.2 mi E of Pont Casse, May 1964, 1♂, OF; 0.5 mi W Pt. Lolo, 1,600′, Feb. 1965, 4♀, JC, TC; Trafalgar, May 1965, 1♀, DD.

*Erelieva quantulella* (Hulst)
Figs. 4g, 6i

*Erelieva quantulella* (Hulst). Heinrich, 1956:308.

Heinrich records the larvae feeding on *Opuntia* (flowers), bell pepper

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Fig. 8. ♀ genitalia. a, *Acrobasis caribbeana*, new species, paratype; b, *Coptarthria dasypyga*; c, *Piesmopoda dominica*, new species, paratype; d, *Drescoma* sp.; e, *Fissicera spicata*, new species, paratype.

(ripened pods), and sorghum. The species is recorded from Texas, Puerto Rico, St. Croix, Cuba, and Haiti.

*Material.*—Grande Savane, Apr. 1965, 2♂, 7♀, DD; May 1965, 1♀, DD; June 1965, 1♀, DD.

[*Myelois*] *famula* Zeller
Figs. 4h, 6j

[*Myelois*] *famula* Zeller. Heinrich, 1956:312.

As Heinrich indicated, the genitalia of this species rule out placement in *Myelois*. Heinrich lacked the male specimens necessary for proper generic assignment, and the Dominica specimens I have seen are, unfortunately, all females.

*Material.*—Cabrit Swamp, Oct. 1966, 1♀, ET; Grande Savanne, Oct. 1966, 4♀, ET; Rosalie, June 1965, 1♀, DD.

*Fissicera*, new genus

*Type-species.*—*Fissicera spicata*, new species.

*Diagnosis.*—The male genitalia are quite distinctive, in particular the form of the valves and the development of the uncus with its dense patch of long sinuate hairs resembles that of no other phycitine genus in the Western Hemisphere.

*Description.*—Labial palpi similar in both sexes, rather slender, obliquely ascending, surpassing vertex. Maxillary palpus squamous, appressed to frons. Male antenna with base of shaft bearing deeply concave sinus (involving about 8 basal segments) on inner surface, distal one fifth of sinus formed by densely-packed mass of broad scales, surface of sinus varnished looking; shaft sublaminate, finely ciliate, length of cilia no more than half width of shaft over most of its length. Female antenna filiform, very finely ciliate. Tongue well developed. Ocelli well developed, black. Forewing with 11 veins; $R_2$ from near upper outer angle of cell, closely approximate with $R_{3+5}$ for short distance beyond cell; $R_{3+5}$ just over one-half length of $R_5$, from the angle; $M_1$ from near, but just below the angle; $M_2$ and $M_3$ from same point, from lower outer angle; $Cu_1$ from before the angle; $Cu_2$ from well before the angle. Hindwing with 8 veins, Sc and Rs anastomosed for about half their length beyond cell; $M_{2+3}$ anastomosed for about half their length beyond cell, from lower outer angle; $Cu_1$ from very near the angle; $Cu_2$ from well before the angle. Male genitalia complex (Fig. 7g). Uncus of two sclerites, each apically flat, digitate in outline, in contact but unfused along midline; each caudally bearing very dense tuft of long sinuate, scale-like hairs. Gnathos small, apparently fused with subscaphium. Transtilla complete, with small rectangular medial process at gnathos, and

pair of long slender arms extending anteriorly to anterior end of vinculum. Valvae with costa truncate, somewhat less than half as long as entire valve, truncated distal margin slightly concave; cucullus well developed, separate, distal margin broadly rounded, dorsodistal corner falcate, a narrow but dense patch of short blade-like scales perpendicular from its inner surface near apex; sacculus terminating in long, curved, stout spine, reaching nearly as far distally as cucullus; a pair of strong spines arising from proximal-dorsal angle of sacculus, the longer about twice as long as the shorter, and reaching nearly as far distally as cucullus. Vinculum about twice as long as wide, anterior margin rounded, mid-portion of margin slightly concave. Aedeagus cylindrical, about 6 times as long as wide, vesica with a pair of indistinct curved, plate-like cornuti.

Female genitalia (Fig. 8e) with ductus bursae less than half length of bursa, bearing weakly sclerotized subrectangular plate near ostium. Bursa unarmed, unornamented. Ductus seminalis from posterior end of bursa.

*Fissicera spicata*, new species
Figs. 1a, b; 7g, h, i; 8e

*Diagnosis.*—This is the only known species in the genus.

*Description.*—Labial palpi with basal segments white, a few wine red scales distally on outer sides; second segments white on inner sides, wine red on dorsal margin and distally on outer sides, brown to white elsewhere with a very few black scales on outer sides; third segments with outer sides wine red dorsally, black ventrally, a lighter wine red on inner sides. Occiput laterally deep wine red with small bars of white, olive brown dorsally. Patagia and tegulae olive-brown. Forewing with costa margined with reddish brown, margined posteriorly with broad costal band, white, sewn with reddish-brown scales; band not sharply delimited posteriorly, and not quite attaining either wing base or apex. Ground on basal half of wing olive brown, becoming gradually reddish brown toward outer margin of wing, reddish brown on outer half of wing on inner margin. In some specimens the olive-brown ground nearly replaced by reddish brown. Reddish-brown spot along costa, about one-third distance from wing base. Small reddish-brown discal spot in white costal band at junction with olive-brown ground. Antemedial line absent. Sinuate, light colored subterminal line, bordered proximally by darker line of same width, distally by dark area (especially toward wing apex where reddish-brown is more intense and sewn with black scales) extending to fringe. Terminal line of small black spots.

*Holotype.*—♂, No. USNM 75714, labeled: "Dominica, S. Chiltern, XII-8-10-1964, P. J. Spangler; Bredin-Archbold-Smithsonian Bio. Surv. Dominica; ♂ genitalia on slide 1074, J. C. Shaffer."

*Paratypes.*—Three males collected by D. R. Davis, 2 mi NW Pont Casse, dated 4, 9, and 17 May 1965. Six females collected by D. R. Davis, 2 mi NW Pont Casse, dated: 13 April, 7, 9, 18, 18 May, and 5 June, 1965.

*Other specimens examined.*—2 mi NW Pont Casse, 13 April 1965, 3♀, DD; 18 April, 1♀, DD; 4 May, 1♀, DD; 7 May, 1♀, DD; 18 May, 1♀, DD; 23 May, 1♀, DD; 26 May, 1♀, DD; 0.5 mi S Pont Casse, 5 April, 1♀, DD; 3 mi E Pont Casse, 22 Oct. 1966, 3♀, ET; 30 Oct. 1♀, ET; 1.3 mi E Pont Casse, 11 June 1964, 1♀, OF; Cent. For. Res., 3 May 1965, 1♀ (collector not given).

The genus falls into wing venational division I of Heinrich, but the genitalia of neither sex matches anything figured therein.

## Literature Cited

Heinrich, Carl. 1956. American moths of the subfamily Phycitinae. U.S. Nat. Mus. Bull. 207, viii + 581 pp.

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